



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/815,718

04/02/2004

Andre Gabioud

251322US6

9436

22850

7590

10/04/2006

C. IRVIN MCCLELLAND
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

MIDKIFF, ANASTASIA

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/815,718	Applicant(s) GABIOUD ET AL.	
	Examiner Anastasia Midkiff	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 12 is objected to because of the following informalities:

In Line 1 of Claim 12, insert the term --one-- between “any” and “of” in order to place in proper multiple dependent form.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to Claim 15, Line 2 recites the limitation “the second ring”. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7, 9, 11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazutaka (JP 03-030239).

With respect to Claim 7, Kazutaka teaches a control grid, comprising:

- a first ring of first bars (3) that are evenly spaced out on a skewed surface (Figure 2),
 - wherein the first bars extend substantially as a circle pseudo-involutes about a central hub (Figure 2).

With respect to Claim 9, Kazutaka teaches that the first bars (3) are evenly spaced out about the central hub (Figure 2).

With respect to Claim 11, Kazutaka teaches that the skewed surface is a surface of a sphere (Figure 2).

With respect to Claim 13, Kazutaka teaches that any pair of two points on adjacent first bars (3), the pair of two points defined by crossing points of a line perpendicular to the first bars, are equidistant (Figure 2).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazutaka, as for Claim 7 above, and in view of U.S. Patent to Fay (USP# 2,617,959).

With respect to Claim 12, Kazutaka teaches most of the elements of the claimed invention, but does not specifically teach that a first end of each bar being closest to the central hub is substantially perpendicular to an element to which the first bar is connected, the element being the central hub or a second bar.

Fay teaches an electron control grid (Figure 2) wherein a ring of first bars (48) extend substantially as a circle pseudo-involutes about a central hub (46, Figures 2 and 4), and wherein a first end of each bar being closest to the central hub is substantially perpendicular to the central hub (at 51, Figures 2 and 4) to maintain a constant distance between neighboring bars that corresponds to the radii of the central hub (Column 5 Lines 63-75, and Column 6 Lines 1-36).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the perpendicular orientation of the first end of the bars to the central hub of Fay in the apparatus of Kazutaka to provide even shielding over the face of the cathode due to equal spacing of bars, as taught by Fay (Column 7 Line 75, and Column 8 Lines 1-14).

Allowable Subject Matter

Claims 8, 10, and 14 are allowed.

With respect to Claims 8 and 14, the best prior art of record teaches many of the elements of the claimed invention, including a control grid comprising first bars extended substantially as a circle pseudo-involutes about a central hub.

However, the prior art fails to teach or fairly suggest a control grid wherein the grid further comprises a second bar substantially concentric with the central hub and fixed to the periphery of the first ring of first bars, as well as a second ring of first bars extending from the second bar, in the manner required by claims 8 and 14.

Claim 10 is allowed by virtue of its dependency upon Claim 8.

Response to Arguments

Applicant's arguments with respect to claims 7-15 have been considered but are moot in view of the new ground(s) of rejection. However, due to the similarities between prior claim 1 and claim 7, one issue remains regarding Kazutaka.

With respect to Claim 7, Applicant asserts that Kazutaka does not teach that the first bars are substantially extended as circle pseudo-involutes about the central hub. Examiner respectfully disagrees.

Kazutaka shows a configuration of the first bars (3) in Figure 2, wherein the bars will be equidistant, one from another at any one line drawn through all rings, as required by the definition of circle pseudo-involutes from the Applicant's specification (see Page 5, Lines 3-10) and the bars of the Kazutaka reference do not appear to taper as "spirals" any more than do the bars of the Applicant's invention (see Figure 8 of the present application). Examiner notes that the Fay reference, cited above for Claim 12, also

teaches this limitation (see Fay, Figures 2 and 4, Column 7 Line 75, and Column 8 Lines 1-14).

Applicant's arguments, see Applicant Amendment, filed 20 March 2006, with respect to objections to the drawings have been fully considered and are persuasive. The objections to the drawings have been overcome by the amended drawings.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

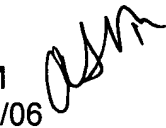
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anastasia Midkiff whose telephone number is 571-272-5053. The examiner can normally be reached on M-F 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASM
9/23/06



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER